

## Preliminary Annotated Checklist of the Lepidoptera of Atwood Lake Park, Ohio<sup>1</sup>

ROY W. RINGS AND ERIC H. METZLER,<sup>2</sup> Department of Entomology, Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, OH 44691

**ABSTRACT.** A comprehensive survey of the Lepidoptera occurring at a recreational center in Carroll and Tuscarawas counties, Ohio was conducted from 1985 to 1986. Sampling was done using the following techniques: ultraviolet light traps, mercury vapor lamp plus ultraviolet light and collecting sheet, bait traps, sugaring, and netting. A total of 428 species and forms were identified and tabulated. Representative specimens were deposited in the reference collection of the Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, Ohio. The current status of the abundance of each species was described.

OHIO J. SCI. 88 (4): 159-168, 1988

### INTRODUCTION

The occurrence of individual species of butterflies and skippers in Ohio is moderately well known and documented, whereas the seasonal and geographical distribution of most moth species is relatively unknown. In comparison with neighboring states the taxon has not received as much attention. For example, state-wide lists of Lepidoptera have been published by Forbes (1923, 1948, 1954, 1960) for New York, Moore (1955) for Michigan, and Tietz (1952) for Pennsylvania.

Local checklists, which include butterflies, skippers, and moths, have been published by Bales (1909), Dury (1878), Henninger (1910), Pilate (1882), and Rings et al. (1987). Many other papers have been published on the Lepidoptera of Ohio, but these have been confined to the butterflies or butterflies and skippers.

The authors have been preparing a checklist of the owlet moths of Ohio since 1974. This effort has involved the collection of specimens throughout the state to determine species present and their seasonal and geographical distribution. In March, 1986, The Ohio Lepidopterists organization, in which the authors are actively engaged, sponsored a cooperative research project with, and financed by, the Division of Wildlife,

Ohio Department of Natural Resources. The long-range goal of this project involves a comprehensive survey of Ohio Lepidoptera including the following objectives: 1) to survey those counties where little or no collecting has been done to determine species composition and geographical distribution; 2) to form a reference collection of authentically determined species from Ohio and to deposit representative specimens in the reference collections of The Ohio State University and other institutions; 3) to prepare a checklist, by suborder, family, or family groups, of all the species of butterflies, skippers, and moths known from Ohio; and 4) to recommend to the Division of Wildlife species that should be classified as "endangered," "threatened" or "of special concern."

The immediate objective of this paper is to record the results of a two-year survey of Lepidoptera conducted at Atwood Lake Park. Its publication establishes a data base upon which to build a more comprehensive body of knowledge. It also provides a status report on many of the species in the Park as of October, 1986. Subsequent studies may show that the status of some species at this site has changed to threatened, endangered or of special concern.

### DESCRIPTION OF THE STUDY SITE

Atwood Lake is situated 1 km northwest of Sherodsville just off State Route 212 on Tuscarawas County Road 93. The Park lies in southwestern Carroll County and northeastern Tuscarawas County. It occupies a non-

<sup>1</sup>Manuscript received 13 May 1987 and in revised form 9 November 1987 (87-23).

<sup>2</sup>Ohio Department of Natural Resources, Fountain Square, Columbus, OH 43224.

glaciated area on the Berks-Westmoreland soil association. This soil type is moderately deep to deep, dominantly gently sloping to very steep, well-drained, formed in residuum and colluvium derived from sandstone, siltstone and shale. It is surrounded by prime farmland, devoted mostly to dairy farming.

Atwood Lake Reservoir was constructed in 1937 on Indian Fork Creek by the Muskingum Watershed Conservancy District. The eastern section of the lake occurs in Carroll County; the western part is located in Tuscarawas County. It has a surface area of 3,803.8 ha, a maximum depth of 12.3 m, and a shore line length of 44.8 km. Atwood Lake Park serves as a recreational, educational, wildlife conservation, natural history research, and community service facility. A series of hiking trails are located within the park varying in length from 1.6 km to several km. These nature trails were used as collecting sites for moths, butterflies, and skippers.

In addition to the naturally occurring oak-hickory and beech-maple woodlands, the area has been planted to white pine (*Pinus strobus* L.), pitch pine (*P. rigida* Mill.), red pine (*P. resinosa* Ait.), and yellow poplar (*Liriodendron tulipifera* L.) in reforestation programs.

## MATERIALS AND METHODS

Collecting was conducted when maximum daily temperatures were above 16.9 degrees C (60 degrees F). A total of seven collecting trips, two- or three-days in length, were made to the Park from 21 April to 9 October, 1985. In 1986, 14 one-day collecting trips were made between 26 March and 18 October. Butterflies and skippers were collected only on the second of the two-day trips. Lepidoptera were collected by netting, by the use of an 18 watt, 12 volt DC ultra-violet lamp and sheet, by ultra-violet light traps, and by "sugaring." The light trap used was an Ellisco General Purpose "Black Light" Trap; the sugar bait consisted of crushed apples, peaches, grapes, bananas, pears, yeast, and brown sugar. This mixture was allowed to ferment for several weeks before use and was applied to trees along the nature trails. Moths coming to feed on the sugar bait were collected by means of a flashlight and killing jar.

Four collection sites, characterized by a diversity of vegetation, were chosen for light attraction studies and sugaring. The first site was located in a clearing on a wooded hillside, which had been partially planted to various species of pines (*Pinus* sp.) and was near the cabin area. The second was located in a low lying area of an old field containing grasses (*Poa* spp.), milkweed (*Asclepias* sp.), goldenrod (*Solidago* sp.), Joe Pye weed (*Eupatorium purpureum* L.), and ironweed (*Epilobium angustifolium* {L.}). A third was in Camp Area No. 3 where many mature black cherry, ash, and oak stood. The fourth was a clearing in an oak-hickory woods near the main campground.

## RESULTS AND DISCUSSION

Species and forms are listed in Table 1 according to the most recent regional checklist (Hodges et al. 1983). The numbers preceding the species are their checklist numbers. Common names, when available, are taken from Covell (1984) and Klots (1951). The status of each species indicated as abundant (> 10 specimens collected), common (5-10 specimens), uncommon (2-4 specimens) and rare (only 1 specimen). This status rating is purely arbitrary and intended only for the collections made in this study. Many of the species classified as "rare" might have been "common" if collecting had been done more frequently and over a longer period. Other species classified as "rare" or "uncommon" may have been out of their normal habitat at this site. This is particularly true if a species has strong dispersal tendencies. Some examples are the cutworm moths which may be found in vast numbers in monocultures of domesticated crops.

Similar collections by the authors in state wildlife preserves, state parks, and other areas aided in determining the status at this site, as far as endangerment is concerned. In other words, it was known in advance which species were common, uncommon, or rare in northeastern Ohio.

When more than one collection date is listed, the first date is the earliest record of collection, and the second is the latest in a calendar year. Following the date of collection is the method of collection abbreviated as follows: BL, blacklight and sheet; BT, screened trap baited with fermented bait; BLT, blacklight trap; S, sugaring; L, larvae; and N, netted.

A total of 428 species and forms of Lepidoptera, representing 26 families, were collected and identified during the course of this study (Table 1). None of

TABLE 1

*Species of Lepidoptera Collected at Atwood Lake Park, Ohio in 1985 and 1986. Abbreviations are: BL, black light and sheet; BT, screened trap baited with fermenting fruit mixture; BLT, black light trap; L, larval collection; N, netted; S, sugaring.*

<b>FAMILY TINEIDAE-Tineid moths</b>	
372	<i>Acrolophus plumifrontella</i> (Clem.) Carroll Co. 27 Jun 1985 BL; Tuscarawas Co. 23 Jun 1986 BL Uncommon
373	<i>Acrolophus popeanella</i> (Clem.) Carroll Co. 27 Jun 1986 S Rare
<b>FAMILY PSYCHIDAE-Bagworm moths</b>	
443	<i>Astala confederata</i> (G. & R.) Tuscarawas Co. 26 Mar 1986 L Rare
<b>FAMILY OECOPHORIDAE-Oecophorid moths</b>	
1011	<i>Antaeotricha schlaegeri</i> (Zell.) Tuscarawas Co. 7 May-14 Jul 1986 BL, BLT Uncommon
<b>FAMILY YPONOMEUTIDAE-Ermine moths</b>	
2401	<i>AILANTHUS WEBWORM</i> <i>Atteva punctella</i> (Cram.) Carroll Co. 22 Apr 1985; Tuscarawas Co. 13 Aug-13 Sep 1986 BL, BLT Common
<b>FAMILY SESIIDAE-Clear-winged moths</b>	
2550	<b>LESSER PEACH TREE BORER</b> <i>Synathedon pictipes</i> (G. & R.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 9 Mar 1986 L Abundant
<b>FAMILY TORTRICIDAE-Leaf-roller moths</b>	
3602	<b>PINE TUBE MOTH</b> <i>Argyrotaenia pinatubana</i> (Kft.) Tuscarawas Co. 13 Sep 1986 BL Abundant
3638	<b>SPRUCE BUDWORM</b> <i>Choristoneura fumiferana</i> (Clem.) Tuscarawas Co. 7 Jul 1986 BL Rare
3695	<b>SPARGANTHUS FRUITWORM</b> <i>Sparganothis sulfureana</i> (Clem.) Tuscarawas Co. 13 Sep 1986 BLT Rare
<b>FAMILY HESPERIIDAE-Skippers</b>	
4004	<b>LEAST SKIPPER</b> <i>Ancyloxypha numitor</i> (F.) Carroll Co. 24 May 1985 N Rare
4012	<b>EUROPEAN SKIPPER</b> <i>Thymelicus lineola</i> (Ochs.) Carroll Co. 27 Jun 1985 N Rare
4059	<b>HOBOMOK SKIPPER</b> <i>Poanes hobomok</i> (Harr.) Carroll Co. 24 May 1985 N Uncommon
<b>FAMILY PAPILIONIDAE-Swallowtail butterflies</b>	
4159	<b>BLACK SWALLOWTAIL</b> <i>Papilio polyxenes</i> F. Carroll Co. 23 May 1985 N Common
4176	<b>TIGER SWALLOWTAIL</b> <i>Papilio glaucus</i> L. Carroll Co. 23 May 1985 N Common
4181	<b>SPICEBUSH SWALLOWTAIL</b> <i>Papilio troilus</i> L. Carroll Co. 23 May 1985 N Common
<b>FAMILY PIERIDAE-White and sulfur butterflies</b>	
4197	<b>EUROPEAN CABBAGE BUTTERFLY</b> <i>Artogeia rapae</i> (L.) Carroll Co. 22 Apr-23 May 1985; Tuscarawas Co. 23 May-8 Oct 1986 N Common
4209	<b>COMMON SULFUR</b> <i>Colias philodice</i> Godt. Carroll Co. 23 May 1985; Tuscarawas Co. 23 May-8 Oct 1986 N Common
4210	<b>ALFALFA BUTTERFLY</b> <i>Colias eurytheme</i> Bdv. Carroll Co. 27 Jun 1985; Tuscarawas Co. 27 Jun-8 Oct 1986 N Common

TABLE 1 (continued)

FAMILY LYCAENIDAE-Blue and copper butterflies		FAMILY THYATIRIDAE-Thyatirid moths	
4251	AMERICAN COPPER <i>Lycaena phlaeas</i> (L.) Carroll Co. 23 May 1985 N Common	6235	LETTERED HABROSYNE <i>Habrosyne scripta</i> (Gosse) Tuscarawas Co. 23 Jun-14 Jul 1986 BL Uncommon
4363	SPRING AZURE <i>Celastrina ladon</i> (Cram.) Carroll Co. 22 Apr 1985 N Common	6237	TUFTED THYATIRID <i>Pseudothyatira cymatophoroides</i> (Gn.) Carroll Co. 23 May 1985; Tuscarawas Co. 7-13 Aug 1986 BL, BLT, S Abundant
FAMILY NYMPHALIDAE-Brush-footed butterflies		6237	TUFTED THYATIRID <i>Pseudothyatira cymatophoroides</i> f. <i>expultrix</i> (Grt.) Carroll Co. 23 May 1985 BL Uncommon
4420	QUESTION MARK BUTTERFLY <i>Polygonia interrogationis</i> (F.) Carroll Co. 27 Jun 1985 N Common	6240	DOGWOOD THYATIRID <i>Euthyatira pudens</i> (Gn.) Tuscarawas Co. 19 Apr-7 May 1986 BL, BLT Uncommon
4434	AMERICAN PAINTED LADY <i>Vanessa virginiensis</i> (Drury) Carroll Co. 23 May-27 Jun 1985 N Common	FAMILY DREPANIDAE-Hooktip moths	
4435	PAINTED LADY <i>Vanessa cardui</i> (L.) Carroll Co. 23 May 1985 N Common	6251	ARCHED HOOKTIP <i>Drepana arcuata</i> Wlk. Carroll Co. 16 Aug 1985 BL, BLT Uncommon
4451	APHRODITE <i>Speyeria aphrodite</i> (F.) Carroll Co. 27 Jun 1985 N Common	6255	ROSY HOOKTIP <i>Oreta rosea</i> (Wlk.) Tuscarawas Co. 30 Jul-13 Aug 1986 BL, BLT Uncommon
4465	MEADOW FRITILLARY <i>Clossiana bellona</i> (F.) Tuscarawas Co. 8 Oct 1986 N Rare	FAMILY GEOMETRIDAE-Geometrid moths	
4481	PEARL CRESCENT <i>Phyciodes tharos</i> (Drury) Carroll Co. 23 May 1985; Tuscarawas Co. 8 Oct 1986 N Common	6261	COMMON SPRING MOTH <i>Helimata cycladata</i> G. & R. Carroll Co. 24 May 1985; Tuscarawas Co. 29 May 1986 BL Uncommon
4522b	RED-SPOTTED PURPLE <i>Basilarchia arthemis</i> f. <i>astyanax</i> (F.) Carroll Co. 23 May 1985 N Common	6273	LESSER MAPLE SPANWORM <i>Itame pustularia</i> (Gn.) Carroll Co. 27 Jun-16 Aug 1985 BL, BLT Uncommon
4523	VICEROY <i>Basilarchia archippus</i> (Cram.) Carroll Co. 17 Jul 1985 N Common	6303	BARRED ITAME <i>Itame subcessaria</i> (Wlk.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 7 Jul 1986 BL, S Uncommon
FAMILY SATYRIDAE-Wood satyr butterflies		6326	COMMON ANGLE <i>Semiothisa aemulataria</i> (Wlk.) Carroll Co. 23 May-16 Aug 1985; Tuscarawas Co. 23-29 May 1986 BL, BLT Common
4568	PEARLY EYE <i>Enodia portlandia</i> (F.) Carroll Co. 27 Jun 1985 N Common	6331	PROMISCUOUS ANGLE <i>Semiothisa promiscuata</i> Fgn. 17 Jul 1985 BL Rare
4578	LITTLE WOOD SATYR <i>Megisto cymela</i> (Cram.) Carroll Co. 23 May 1985 N Common	6340	MINOR ANGLE <i>Semiothisa minorata</i> (Pack.) Carroll Co. 23 May-27 Jul 1985; Tuscarawas Co. 7 May 1986 BL, BLT Common
FAMILY DANAIIDAE-Monarch butterflies		6342	RED-HEADED INCHWORM <i>Semiothisa bisignata</i> (Wlk.) Carroll Co. 17 Jun-27 Jul 1985; Tuscarawas Co. 23-30 Jun 1986 BL, BLT Uncommon
4614	MONARCH <i>Danaus plexippus</i> (L.) Tuscarawas Co. 13 Sep-8 Oct 1986 N Common	6348	HEMLOCK ANGLE <i>Semiothisa fassinotata</i> (Wlk.) Carroll Co. 27 Jun-7 Jul 1985 BL Uncommon
FAMILY LIMACODIDAE-Slug caterpillar moths		6352	GRANITE MOTH <i>Semiothisa granitaria</i> (Gn.) Carroll Co. 17 Jul 1985 BLT Rare
4652	<i>Tortricidea testacea</i> Pack. Tuscarawas Co. 29 May 1986 BL Uncommon	6449	DOTTED GRAY <i>Glena cribrataria</i> (Gn.) Carroll Co. 24 May 1985; Tuscarawas Co. 7 May 1986 BL, BLT Uncommon
4659	<i>Packardia geminata</i> (Pack.) Tuscarawas Co. 29 May 1986 BL Uncommon	6584	SMALL PURPLISH GRAY <i>Anacamptodes humaria</i> (Gn.) Tuscarawas Co. 19 Apr 1986 BL, BLT Uncommon
4665	<i>Lithacodes fasciola</i> (H.-S.) Tuscarawas Co. 29 May-7 Jul 1986 BL Uncommon	6588	BENT-LINE GRAY <i>Iridopsis larvaria</i> (Gn.) Carroll Co. 5 May-16 Aug 1985; Tuscarawas Co. 7 May-13 Aug 1986 BL, BLT Abundant
4667	<i>Apoda y-inversum</i> (Pack.) Carroll Co. 17 Jul 1985 BLT Rare	6590	COMMON GRAY <i>Anavitrinella pampinaria</i> (Gn.) Carroll Co. 23 May-16 Aug 1985; Tuscarawas Co. 13 Sep 1986 BL, BLT Common
4669	<i>Apoda biguttata</i> (Pack.) Tuscarawas Co. 7 Jul 1986 BL Rare	6594	DOUBLE-LINED GRAY <i>Cleora sublunaria</i> (Gn.) Carroll Co. 22 Apr 1985 BL Rare
4671	SKIFF CATERPILLAR <i>Prolimacodes badia</i> (Hbn.) Tuscarawas Co. 7 Jul-14 Jul 1986 BL Uncommon	6597	THE SMALL ENGRAILED <i>Ectropis crepuscularia</i> (D. & S.) Carroll Co. 22 Apr-17 Jul 1985 BL, BLT Uncommon
4681	<i>Isa textula</i> (H.-S.) Tuscarawas Co. 23 Jun 1986 BL Rare	6598	PORCELAIN GRAY <i>Protoboarmia porcelaria</i> (Gn.) Carroll Co. 24 May 1985 BL Rare
4685	<i>Adoneta spinuloides</i> (H.-S.) Tuscarawas Co. 7 Jul 1986 BL Rare	6599	TULIP TREE BEAUTY <i>Epimecis hortaria</i> (F.) Carroll Co. 22 Apr-16 Aug 1985; Tuscarawas Co. 19 Apr-13 Aug 1986 BL, BLT Abundant
4698	<i>Parasa chloris</i> (H.-S.) Carroll Co. 27 Jun 1985 BL. Tuscarawas Co. 7-14 Jul 1986 BL Common	6620	CANADIAN MELANOLOPHIA <i>Melanolophia canadaria</i> (Gn.) Carroll Co. 22 Apr-16 Aug 1985; Tuscarawas Co. 19 Apr-14 Jul 1986 BL, BLT Abundant
4697	SPINY OAK SLUG <i>Euclea delphinii</i> (Bdv.) Tuscarawas Co. 23 Jun-7 Jul 1986 BL Uncommon	6621	SIGNATE MELANOLOPHIA <i>Melanolophia signataria</i> (Wlk.) Carroll Co. 22 Apr 1985 BL Rare
4700	SADDLEBACK CATERPILLAR <i>Sibine stimulea</i> (Clem.) Tuscarawas Co. 23 Jun-7 Jul 1986 BL Uncommon	6640	PEPPER AND SALT MOTH <i>Biston betularia</i> f. <i>suetaria</i> (B. & McD.) Carroll Co. 23 May 1985; Tuscarawas Co. 7 May-13 Aug 1986 BL, BLT Abundant
FAMILY PYRALIDAE-Pyralid moths		6640a	PEPPER AND SALT MOTH <i>Biston betularia</i> f. <i>cognataria</i> (Gn.) Tuscarawas Co. 29 May-30 Jul 1986 BL, BLT Abundant
4897	PURPLE-BACKED CABBAGE WORM <i>Evergestis pallidata</i> (Hufn.) Tuscarawas Co. 13 Sep 1986 BLT Uncommon	6654	ONE-SPOT VARIANT <i>Hypagyrtis unipunctata</i> (Haw.) Carroll Co. 23 May-16 Aug 1985; Tuscarawas Co. 29 May-13 Aug 1986 BL, BLT Common
4949	EUROPEAN CORN BORER <i>Ostrinia nubilalis</i> (Hbn.) Carroll Co. 27 Jun-15 Aug 1985; Tuscarawas Co. 29 May-30 Jul 1986 BL, BLT Abundant	6658	<i>Phigalea titea</i> (Cram.) Tuscarawas Co. 1 Apr-7 May 1986 BL, BLT Uncommon
5159	GRAPE LEAF-FOLDER <i>Desmia funeralis</i> (Hbn.) Carroll Co. 23 May-16 Aug 1985; Tuscarawas Co. 7 May-30 Jul 1986 BL, BLT Abundant		
5182	<i>Blepharomastix ranalis</i> (Gn.) Carroll Co. 27 Jun 1985 BLT Rare		
5226	<i>Palpita magniferalis</i> (Wlk.) Carroll Co. 27 Jun 1985 BLT Common		
5362	A SOD WEBWORM <i>Crambus agitelus</i> Clem. Carroll Co. 27 Jun 1985; Tuscarawas Co. 30 Jul 1986 BLT Uncommon		
5392	<i>Arequipa turbatella</i> Wlk. Tuscarawas Co. 13 Sep 1986 BLT Rare		
5420	<i>Microcrambus elegans</i> (Clem.) Tuscarawas Co. 13 Sep 1986 BLT Rare		
5524	CLOVER HAYWORM <i>Hypsopygia costalis</i> (F.) Carroll Co. 17 Jul 1985; Tuscarawas Co. 29 May-23 Sep 1986 BL, BLT Common		

TABLE 1 (continued)

6660	<i>Phigalia strigaria</i> (Minot) Tuscarawas Co. 1 Apr 1985 BLT Rare	6843	FERVID PLAGODIS <i>Plagodis fervidaria</i> (H.-S.) Carroll Co. 17 Jul 1985; Tuscarawas Co. 14–30 Jul 1986 BL, BLT Uncommon
6662	SPRING CANKERWORM <i>Paleacrita vernata</i> (Peck.) Carroll Co. 9 Mar 1986 BL Abundant	6844	HOLLOW-SPOTTED PLAGODIS <i>Plagodis alcolaria</i> (Gn.) Carroll Co. 23 May 1985; Tuscarawas Co. 7–29 May 1986 BL, BLT Uncommon
6667	WHITE SPRING MOTH <i>Lomographa vestaliata</i> (Gn.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 7–29 May 1986 BL, BLT Abundant	6884	STRAW BESMA <i>Besma endropiaria</i> (G. & R.) Tuscarawas Co. 29 May 1986 BL Rare
6668	GRAY SPRING MOTH <i>Lomographa glomeraria</i> (Grt.) Carroll Co. 22 Apr 1985 BL; Tuscarawas Co. 1–29 Apr 1986 BL, BLT Common	6888	HEMLOCK LOOPER <i>Lambdina fiscellaria</i> (Gn.) Carroll Co. 8 Oct 1985; Tuscarawas Co. 23 Sep 1986 BLT Uncommon
6720	COMMON LYTROSIS <i>Lyttosia unitaria</i> (H.-S.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 23 Jun 1986 BL, BLT, S Abundant	6892	YELLOW-HEADED LOOPER <i>Lambdina pellucidaria</i> (G. & R.) Tuscarawas Co. 14 May 1986 BL Rare
6724	SAW WING <i>Euchlaena serrata</i> (Drury) Tuscarawas Co. 14 Jul 1986 BLT Rare	6894	CURVE-LINED LOOPER <i>Lambdina fervidaria</i> (Hbn.) Carroll Co. 22 Apr–23 May 1985; Tuscarawas Co. 29 Apr–29 May 1986 BL Uncommon
6726	OBTUSE EUCHLAENA <i>Euchlaena obtusaria</i> (Hbn.) Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 29 May–13 Aug 1986 BL Common	6941	CONFUSED EUSARCA <i>Eusarca confusaria</i> Hbn. Carroll Co. 23 May 1985; Tuscarawas Co. 29 May 1986 BL, BLT Uncommon
6729	JOHNSON'S EUCHLAENA <i>Euchlaena johnsonaria</i> (Fitch) Carroll Co. 16 Aug 1985 BL Rare	6963	YELLOW SLANT-LINE <i>Tertracis crocallata</i> Gn. Tuscarawas Co. 29 May–23 Jun 1986 BL, BLT Common
6735	FORKED EUCHLAENA <i>Euchlaena pectinaria</i> (D. & S.) Tuscarawas Co. 30 Jul 1986 BLT Uncommon	6964	WHITE SLANT-LINE <i>Tertracis cachectata</i> Gn. Carroll Co. 23 May 1985; Tuscarawas Co. 29 May 1986 BL Uncommon
6737	MOTTLED EUCHLAENA <i>Euchlaena tigrinaria</i> (Gn.) Carroll Co. 16 Aug 1985 BL, BLT Uncommon	6965	SNOWY GEOMETER <i>Eugonobapta nivosaria</i> (Gn.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 23 Jun 1986 BL Uncommon
6739	<i>Euchlaena irraria</i> (B. & McD.) Carroll Co. 24 May 1985 BL Uncommon	6966	CURVED-TOOTHED GEOMETER <i>Eutrapela clemataria</i> (J. E. Smith) Tuscarawas Co. 1 Apr–30 Jul 1986 BL, BLT Abundant
6740	FALSE CROCUS GEOMETER <i>Xanthotype urticaria</i> Swett. Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 29 May–13 Aug 1986 BL, BLT Common	6982	LARGER MAPLE SPANWORM <i>Prochoerodes transversata</i> (Drury) Carroll Co. 27 Jun–16 Sep 1985; Tuscarawas Co. 23 Jun–23 Sep 1986 BL, BLT Abundant
6743	CROCUS GEOMETER <i>Xanthotype sospeta</i> (Drury) Carroll Co. 24 May 1985 BL Rare	6987	VARIABLE ANTEPIONE <i>Antepione thisaaria</i> (Gn.) Tuscarawas Co. 7 May–30 Jul 1986 BLT Common
6753	HONEST PERO <i>Pero honestaria</i> (Wlk.) Carroll Co. 22 Apr–16 Aug 1985; Tuscarawas Co. 19 Apr–13 Aug 1986 BL, BLT Abundant	7009	HORNED SPANWORM <i>Nematocampa limbata</i> (Haw.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 30 Jul 1986 BLT Uncommon
6754	HUBNER'S PERO <i>Pero hubneraria</i> (Gn.) Carroll Co. 24 May 1985; Tuscarawas Co. 29 May–30 Jul 1986 BL, BLT Uncommon	7046	TWO-STRIPED EMERALD <i>Nemoria bistriaria</i> f. <i>rubromarginaria</i> (Pack.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 19 Apr–7 May 1986 BL, BLT Uncommon
6755	MORRISON'S PERO <i>Pero morrisonaria</i> (Hy. Edw.) Carroll Co. 24 May 1985 BL Rare	7053	SHOWY EMERALD <i>Dichorda iridaria</i> (Gn.) Tuscarawas Co. 20 May–30 Jul 1986 BL, BLT Uncommon
6796	PALE BEAUTY <i>Campaea perlata</i> (Gn.) Carroll Co. 23 May–16 Sep 1985; Tuscarawas Co. 29 May–13 Sep 1986 BL Abundant	7058	WAVY-LINED EMERALD <i>Synchlora aerata</i> (F.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 23 Sep 1986 BL Rare
6797	MAPLE SPANWORM <i>Ennomos magnaria</i> Gn. Carroll Co. 8 Oct 1985 BL, BLT Uncommon	7071	BLACKBERRY LOOPER <i>Chlorochlamys chloroleucaria</i> (Gn.) Carroll Co. 23 May 1985 BL Rare
6818	KENT'S GEOMETER <i>Selenia kentaria</i> (G. & R.) Tuscarawas Co. 19 Apr 1986 BLT Uncommon	7132	COMMON TAN WAVE <i>Pleuroprucha insulsaria</i> (Gn.) Carroll Co. 8 Oct 1985 BLT Rare
6819	PALE METANEMA <i>Metanema inatoma</i> Gn. Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 13 Aug 1986 BL Common	7146	CHICKWEED GEOMETER <i>Haematopsis grataria</i> (F.) Tuscarawas Co. 13 Sep 1986 BLT Rare
6820	DARK METANEMA <i>Metanema determinata</i> Wlk. Tuscarawas Co. 29 May 1986 BLT Rare	7159	LARGER LACE BORDER <i>Scopula limboundata</i> (Haw.) Carroll Co. 23 May 1985; Tuscarawas Co. 29 May–7 Jul 1986 BL Common
6826	COMMON METARRANTHIS <i>Metarranthis hypocharia</i> (H.-S.) Carroll Co. 24 May 1985; Tuscarawas Co. 7–29 May 1986 BL, BLT Uncommon	7189	ORANGE-BARRED CARPET <i>Dysstroma bersiliata</i> (Gn.) Tuscarawas Co. 29 May–23 Jun 1986 BL Common
6835	SCALLOP MOTH <i>Cepphis armataria</i> (H.-S.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 23 Jun–7 Jul 1986 BL, BLT Uncommon	7196	LESSER GRAPEVINE LOOPER <i>Eulithis diversilineata</i> (Hbn.) Carroll Co. 16 Aug–16 Sep 1985; Tuscarawas Co. 7 Jul–23 Sep 1986 BL, BLT Abundant
6836	AMERICAN BARRED UMBER <i>Anagoga occiduaris</i> (Wlk.) Tuscarawas Co. 14 Jul 1986 BLT Rare	7290	BARBERRY GEOMETER <i>Coryphista meadii</i> (Pack.) Carroll Co. 16 Aug 1985 BLT Rare
6837	DOGWOOD PROBOLE <i>Probole alienaria</i> H.-S. Carroll Co. 24 May 1985; Tuscarawas Co. 7 May–13 Aug 1986 BL, BLT Uncommon	7292	FERGUSON'S SCALLOP SHELL <i>Hydria prunivora</i> (Fgn.) Carroll Co. 23 May–17 Jul 1985; Tuscarawas Co. 7 May–13 Aug 1986 BL, BLT Abundant
6837.1	<i>Probole alienaria nyssaria</i> (Gn.) Tuscarawas Co. 7 May 1986 BLT Rare	7307	WHITE-RIBBONED CARPET <i>Mesoleuca ruficollata</i> (Gn.) Tuscarawas Co. 7 Jul 1986 BL Rare
6838	FRIENDLY PROBOLE <i>Probole amicararia</i> (H.-S.) Carroll Co. 22 Apr–16 Aug 1986; Tuscarawas Co. 29 May–7 Jul 1986 BL, BLT Uncommon	7329	<i>Anticlea vasiliata</i> Gn. Tuscarawas Co. 19–29 Apr 1986 BL, BLT Uncommon
6840	LEMON PLAGODIS <i>Plagodis serinaria</i> H.-S. Carroll Co. 23 May 1985; Tuscarawas Co. 7 May 1986 BL, BLT Uncommon	7368	LABRADOR CARPET <i>Xanthorhoe labradorensis</i> (Pack.) Carroll Co. 16 Aug 1985 BL Rare
6841	PURPLE PLAGODIS <i>Plagodis keutzingi</i> (Grt.) Carroll Co. 23 May 1985; Tuscarawas Co. 7 May–30 Jul 1986 BL Common	7388	RED TWIN SPOT <i>Zanthorhoe ferrugata</i> (Cl.) Carroll Co. 23 May 1985; Tuscarawas Co. 19–29 Apr 1986 BL, BLT Uncommon
6842	STRAIGHT-LINED PLAGODIS <i>Plagodis phlogosaria</i> (Gn.) Carroll Co. 17 Jul 1985 BLT Rare	7390	TOOTHED BROWN CARPET <i>Zanthorhoe lacustrata</i> (Gn.) Carroll Co. 22 Apr–16 Aug 1985; Tuscarawas Co. 1 Apr 1986 BL, BLT Uncommon

TABLE 1 (continued)

7399	SHARP-ANGLED CARPET <i>Euphyia unangulata intermedia</i> (Gn.) Carroll Co. 27 Jun 1985 BLT Uncommon	7825	SMALL-EYED SPHINX <i>Paonias myops</i> (J. E. Smith) Carroll Co. 27 Jun-16 Aug 1985 BL; Tuscarawas Co. 7 May-13 Aug 1986 BL, BLT Abundant
7414	THE GEM <i>Orthonama obstipata</i> (F.) Tuscarawas Co. 1 Apr 1986 BLT Rare	7859	PANDORUS SPHINX <i>Eumorphia pandorus</i> (Hbn.) Carroll Co. 27 Jun 1985 BL; Tuscarawas Co. 30 Jul 1986 BL Uncommon
7416	BENT-LINE CARPET <i>Orthonama centrostrigaria</i> (Woll.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 26 Mar-13 Aug 1986 BL, BLT, S Common	7870	ABBOTT'S SPHINX <i>Sphecodina abbottii</i> (Swainson) Carroll Co. 23 May 1985; Tuscarawas Co. 23 Jun 1986 BL, S Uncommon
7419	<i>Hydrelia lucata</i> (Gn.) Carroll Co. 23 May 1985 BL Uncommon	7871	LETTERED SPHINX <i>Deidamia inscripta</i> (Harr.) Carroll Co. 23 May 1985 BLT Rare
7422	<i>Hydrelia inornata</i> (Hulst) 23 May-7 Jul 1985 BL, BLT Uncommon	7885	VIRGINIA CREEPER SPHINX <i>Darapsa myron</i> (Cram.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 23 Jun-14 Jul 1986 BL, S Common
7430	WHITE-STRIPED BLACK <i>Trichodezia albovittata</i> (Gn.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 29 May 1986 BLT, S Uncommon	7886	AZALEA SPHINX <i>Darapsa pholus</i> (Cram.) Carroll Co. 23 May 1985; Tuscarawas Co. 13 Aug 1986 BL Uncommon
7440	THE BEGGAR <i>Eubaphe mendica</i> (Wlk.) Carroll Co. 23 May-27 Jun 1985; Tuscarawas Co. 29 May-13 Aug 1986 BL, BLT, S Abundant	FAMILY NOTODONTIDAE-Prominent moths	
7474	COMMON EUPITHECIA <i>Eupithecia miserulata</i> Grt. Carroll Co. 8 Oct 1985 BLT Rare	7895	SIGMOID PROMINENT <i>Clostera albosigma</i> Fitch Carroll Co. 16 Aug 1985; Tuscarawas Co. 29 May-13 Aug 1986 BL Uncommon
7647	THREE-SPOTTED FILLUP <i>Heterophleps triguttaria</i> (H.-S.) Carroll Co. 23 May-27 Jun 1985; Tuscarawas Co. 23 Jun 1986 BL, S Uncommon	7901	APICAL PROMINENT <i>Clostera apicalis</i> (Wlk.) Carroll Co. 24 May 1985 BL Rare
7648	THE BAD WING <i>Dyspteris abortivaria</i> (H.-S.) Tuscarawas Co. 13 Aug 1986 BL Rare	7902	YELLOW-NECKED CATERPILLAR <i>Datana ministra</i> (Drury) Tuscarawas Co. 14 Jul 1986 BL Rare
FAMILY EPIPLEMIDAE-Epiplemid moths		7903	ANGUS'S DATANA <i>Datana angusii</i> G. & R. Carroll Co. 17 Jul 1985; Tuscarawas Co. 29 May-14 Jul 1986 BL, BLT Uncommon
7650	GRAY SCOOPWING <i>Callizzia amorata</i> Pack. Carroll Co. 23 May 1985 BLT Uncommon	7906	CONTRACTED DATANA <i>Datana contracta</i> Wlk. Carroll Co. 17 Jul 1985; Tuscarawas Co. 14 Jul 1986 BL Uncommon
FAMILY APATELODIDAE-Apatelodid moths		7907	WALNUT CATERPILLAR <i>Datana integerrima</i> G. & R. Carroll Co. 17 Jul 1985; Tuscarawas Co. 29 May 1986 BL, BLT Uncommon
7663	SPOTTED APATELODES <i>Apatelodes torrefacta</i> (J. E. Smith) Carroll Co. 17 Jul 1985; Tuscarawas Co. 29 May-14 Jul 1986 BL, BLT Common	7915	WHITE-DOTTED PROMINENT <i>Nadata gibbosa</i> (J. E. Smith) Carroll Co. 27 Jun-16 Aug 1985; Tuscarawas Co. 7 May-13 Aug 1986 BL, BLT Abundant
7665	THE ANGEL <i>Olceclostera angelica</i> (Grt.) Carroll Co. 27 Jun-17 Jul 1985; Tuscarawas Co. 7-14 Jul 1986 BL, BLT Abundant	7919	OVAL-BASED PROMINENT <i>Peridea basitriens</i> (Wlk.) Carroll Co. 23 May-17 Jul 1985; Tuscarawas Co. 14 Jul-13 Aug 1986 BL Common
FAMILY LASIOCAMPIDAE-Tent caterpillars and lappet moths		7920	ANGULOSE PROMINENT <i>Peridea angulosa</i> (J. E. Smith) Carroll Co. 23 May-1 Aug 1985; Tuscarawas Co. 29 May-13 Aug 1986 BL, BLT Common
7670	VELLEDA LAPPET MOTH <i>Tolyte vellea</i> (Stoll.) Carroll Co. 16 Sep 1985; Tuscarawas Co. 13-23 Sep 1986 BL, BLT Abundant	7922	BLACK-RIMMED PROMINENT <i>Pheosia rimosa</i> Pack. Carroll Co. 23 May-16 Aug 1985; Tuscarawas Co. 13 Aug 1986 BL, BLT Uncommon
7687	AMERICAN LAPPET MOTH <i>Phyllodesma americana</i> (Harr.) Tuscarawas Co. 19 Apr 1986 BL Uncommon	7924	ELEGANT PROMINENT <i>Odontesia elegans</i> (Stkr.) Carroll Co. 27 Jun-16 Aug 1985 BL, BLT Uncommon
7698	FOREST TENT CATERPILLAR <i>Malacosoma disstria</i> Hbn. Carroll Co. 23 May 1985; Tuscarawas Co. 23 Jun 1986 BLT, L Abundant	7929	DOUBLE-TOOTHED PROMINENT <i>Nerice bidentata</i> Wlk. Carroll Co. 23 May 1985 BL; Tuscarawas Co. 7 May-13 Aug 1986 BL, BLT Abundant
7701	EASTERN TENT CATERPILLAR <i>Malacosoma americanum</i> (F.) Carroll Co. 23 May-27 Jun 1985; Tuscarawas Co. 23 Jun 1986 BL, BLT, L Abundant	7931	COMMON GLUPHISIA <i>Gluphisia septentrionis</i> Wlk. Tuscarawas Co. 23 Jun-30 Jul 1986 BLT Uncommon
FAMILY SATURNIIDAE-Giant silkworm moths		7936	WHITE FURCULA <i>Furcula borealis</i> (Guer.-Meneville) Carroll Co. 22 Apr-16 Aug 1985; Tuscarawas Co. 29 Apr-13 Aug 1986 BL, BLT Common
7704	IMPERIAL MOTH <i>Eacles imperialis</i> (Drury) Tuscarawas Co. 7 Jul 1986 BL Rare	7951	WHITE SPOTTED PROMINENT <i>Symmerista albifrons</i> (J. E. Smith) Carroll Co. 14 Jun 1985 BLT Uncommon
7715	ROSY MAPLE MOTH <i>Dryocampa rubicunda</i> (F.) 24 May-17 Jul 1985 BL; Tuscarawas Co. 7 May-30 Jul 1986 BL, BLT Abundant	7957	BLACK-SPOTTED PROMINENT <i>Dasylophia anguina</i> (J. E. Smith) Carroll Co. 24 May-27 Jun 1985; Tuscarawas Co. 13 Aug 1986 BL, BLT Uncommon
7719	ORANGE-TIPPED OAKWORM <i>Anisota senatoria</i> (J. E. Smith) Tuscarawas Co. 7 Jul 1986 BL Rare	7958	GRAY-PATCHED PROMINENT <i>Dasylophia thyiatiroides</i> (Wlk.) Tuscarawas Co. 7 May 1986 BL Rare
7723	PINK-STRIPED OAKWORM <i>Anisota virginensis</i> (Drury) Tuscarawas Co. 14 Jul 1986 BL Rare	7974	DRAB PROMINENT <i>Misogada unicolor</i> (Pack.) Carroll Co. 13-16 Aug 1985 BLT Uncommon
7746	IO MOTH <i>Automeris io</i> (F.) Carroll Co. 27 Jun 1985 BL, BLT; Tuscarawas Co. 23 Jun-14 Jul 1986 BL Common	7994	SADDLED PROMINENT <i>Heterocampa guttivitta</i> (Wlk.) Tuscarawas Co. 7 May-23 Jun 1986 BL, BLT Uncommon
7758	LUNA MOTH <i>Actias luna</i> (L.) Carroll Co. 23 May 1985 BL; Tuscarawas Co. 29 Apr-7 Jul 1986 BL Common	7995	WAVY-LINED HETEROCAMPA <i>Heterocampa biundata</i> Wlk. Tuscarawas Co. 23-29 May 1986 BLT Uncommon
7764	PROMETHEA MOTH <i>Callosamia promethea</i> (Drury) Tuscarawas Co. 7 Jul 1986 BL Rare	7998	VARIABLE OAKLEAF CATERPILLAR <i>Lochmaeus manteo</i> Dbdy. Tuscarawas Co. 30 Jul 1986 BL, BLT Uncommon
FAMILY SPHINGIDAE-Hawk moths		7999	DOUBLE-LINED PROMINENT <i>Lochmaeus bilineata</i> (Pack.) Carroll Co. 17 Jul 1985; Tuscarawas Co. 29 May-13 Sep 1986 BL, BLT Common
7786	ELM SPHINX <i>Ceratomia amyntor</i> (Geyer) Tuscarawas Co. 13 Aug 1986 BL Rare		
7787	WAVED SPHINX <i>Ceratomia undulosa</i> (Wlk.) Carroll Co. 17 Jul-16 Aug 1985; Tuscarawas Co. 7-30 Jul 1986 BL, BLT Common		
7789	CATALPA SPHINX <i>Ceratomia catalpae</i> (Bdv.) Tuscarawas Co. 29 May-30 Jul 1986 BL, BLT Uncommon		
7809	LAUREL SPHINX <i>Sphinx kalmiae</i> J. E. Smith Tuscarawas Co. 29 May 1986 BL Rare		
7824	BLINDED SPHINX <i>Paonias excaecatus</i> (J. E. Smith) Carroll Co. 17 Jul 1985 BLT Rare		

TABLE 1 (continued)

8005	MORNING GLORY PROMINENT <i>Schizura ipomoeae</i> Dbdy. Carroll Co. 24 May 1985; Tuscarawas Co. 14–30 Jul 1986 BL, BLT Uncommon	8334	GLOSSY BLACK IDIA <i>Idia lubricalis</i> (Geyer) Carroll Co. 17 Jul 1985; Tuscarawas Co. 14 Jul–13 Aug 1986 BL, S Common
8007	UNICORN CATERPILLAR <i>Schizura unicornis</i> (J. E. Smith) Carroll Co. 23 May 1985; Tuscarawas Co. 29 May–13 Aug 1986 BL Common	8338	DARK-BANDED OWLET <i>Phalaenophana pyramusalis</i> (Wlk.) Carroll Co. 7–23 May 1985 BL Uncommon
8011	BLACK-BLOTCHED SCHIZURA <i>Schizura leptinoides</i> (Grt.) Carroll Co. 17 Jul–16 Aug 1985; Tuscarawas Co. 7 Jul 1986 BL, BLT Uncommon	8348	GRAYISH ZANCLOGNATHA <i>Zanclognatha pedipilalis</i> (Gn.) Carroll Co. 24 May 1985; Tuscarawas Co. 29 May 1986 BL, S Uncommon
8012	RED-WASHED PROMINENT <i>Oligocentria semirufescens</i> (Wlk.) Tuscarawas Co. 23 Jun–7 Jul 1986 BL, BLT, S Uncommon	8349	<i>Zanclognatha protumnusalis</i> (Wlk.) Tuscarawas Co. 16 Jun 1985 BL Rare
8017	WHITE-STREAKED PROMINENT <i>Oligocentria lignicolor</i> (Wlk.) Carroll Co. 16 Aug 1985 BL Rare	8352	<i>Zanclognatha jacchusalis</i> (Wlk.) Tuscarawas Co. 23 Jun 1986 S Rare
FAMILY ARCTIIDAE-Tiger moths		8353	WAVY-LINED ZANCLOGNATHA <i>Zanclognatha ochreipennis</i> (Grt.) Carroll Co. 23 May 1985 BL Rare
8107	CLYMENE TIGER MOTH <i>Haploa clymene</i> (Brown) Carroll Co. 17 Jul 1985 BLT Rare	8355	MORBID OWLET <i>Chytolita morbidalis</i> (Gn.) Carroll Co. 23 May 1985; Tuscarawas Co. 23 Jun 1986 BL, S Uncommon
8111	LECONTE'S HAPLOA <i>Haploa lecontei</i> (Guer.-Meneville) Tuscarawas Co. 29 May–14 Jul 1986 BL, BLT Uncommon	8360	<i>Hormisa orciferalis</i> Wlk. Carroll Co. 23 May 1985; Tuscarawas Co. 29 May 1986 BLT Uncommon
8112	CONFUSED HAPLOA <i>Haploa confusa</i> (Lyman) Tuscarawas Co. 7 Jul 1986 BL Rare	8364	BLACK-BANDED OWLET <i>Phalaenostola larentioides</i> Grt. Carroll Co. 27 Jun 1985 BL Rare
8129	ISABELLA TIGER MOTH <i>Pyrrharctia isabella</i> (J. E. Smith) Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 29 May–13 Sep 1986 BL, BLT Abundant	8370	BENT-WINGED OWLET <i>Bleptina caradrinalis</i> Gn. Carroll Co. 16 Aug 1985 BL Rare
8134	AGREEABLE TIGER MOTH <i>Spilosoma congrua</i> Wlk. Tuscarawas Co. 7 May 1986 BL, BLT Uncommon	8379	<i>Renia factiosalis</i> (Wlk.) Tuscarawas Co. 30 Jul 1986 S Rare
8137	VIRGINIA TIGER MOTH <i>Spilosoma virginica</i> (F.) Carroll Co. 22 Apr–24 May 1985; Tuscarawas Co. 7 May–14 Jul 1986 BL, BLT Common	8380	<i>Renia nemoralis</i> B. & McD. Tuscarawas Co. 23 Jun 1986 BLT Rare
8140	FALL WEBWORM <i>Hyphantria cunea</i> (Drury) Carroll Co. 23 May 1985; Tuscarawas Co. 7 May–23 Jun 1986 BL, BLT Common	8393	<i>Lascoria ambigualis</i> Wlk. Tuscarawas Co. 14 Jul 1986 BLT Rare
8146	GIANT LEOPARD MOTH <i>Epantheria scribonia</i> (Stoll.) Carroll Co. 27 Jun 1985; Tuscarawas Co. 29 May–23 Jun 1986 BL, BLT Uncommon	8397	DARK-SPOTTED PALTHIS, <i>Palthis angulalis</i> (Hbn.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 29 May–23 Sep 1986 BLT Abundant
8169	HARNESSED TIGER MOTH <i>Apantesis phalerata</i> (Harr.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 20 May 1986 BL, BLT Common	8398	FAINT-SPOTTED PALTHIS <i>Palthis asopialis</i> (Gn.) Tuscarawas Co. 13 Aug–23 Sep 1986 BL Common
8197	VIRGIN TIGER MOTH <i>Grammia virgo</i> (L.) Carroll Co. 17 Jul 1985; Tuscarawas Co. 14 Jul 1986 BLT Uncommon	8441	<i>Bomolocha manalis</i> (Wlk.) Tuscarawas Co. 29 May–23 Sep 1986 BL Uncommon
8203	BANDED TUSOCK MOTH <i>Halysidota tessellaris</i> (J. E. Smith) Carroll Co. 27 Jun–17 Jul 1985; Tuscarawas Co. 29 May–23 Sep 1986 BL, BLT Abundant	8442	<i>Bomolocha baltimoralis</i> (Gn.) Carroll Co. 23 May–14 Sep 1985; Tuscarawas Co. 7 May–13 Sep 1986 BL, BLT Common
8211	HICKORY TUSOCK MOTH <i>Lophocampa caryae</i> Harr. Carroll Co. 23–24 May 1985; Tuscarawas Co. 29 May 1986 BL, BLT Abundant	8443	<i>Bomolocha bijugalis</i> (Wlk.) Carroll Co. 22 Apr–16 Aug 1985; Tuscarawas Co. 7 May–14 Jul 1986 BL, BLT Uncommon
8230	DELICATE CYCNIA <i>Cynia tenera</i> Hbn. Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 29 May–13 Aug 1986 BL, BLT Common	8444	<i>Bomolocha palparia</i> (Wlk.) Tuscarawas Co. 29 May 1986 BL Rare
8238	MILKWEED TUSOCK MOTH <i>Euchaetes egle</i> (Drury) Carroll Co. 17 Jul 1985 BLT Rare	8445	<i>Bomolocha abalienalis</i> (Wlk.) Carroll Co. 22 Apr–24 May 1985; Tuscarawas Co. 7 May–13 Sep 1986 BL Abundant
8267	YELLOW-COLLARED SCAPE MOTH <i>Cisseps fulvicollis</i> (Hbn.) Carroll Co. 24 May–16 Aug 1985; Tuscarawas Co. 29 May–23 Sep 1986 BL, BLT Abundant	8446	<i>Bomolocha deceptalis</i> (Wlk.) Carroll Co. 23 May 1985; Tuscarawas Co. 29 May 1986 BL Uncommon
FAMILY LYMANTRIDAE-Tussock moths		8447	<i>Bomolocha madefactalis</i> (Gn.) Tuscarawas Co. 29 May 1986 BL Rare
8302	STREAKED TUSOCK MOTH <i>Dasychira obliquata</i> (G. & R.) Tuscarawas Co. 30 Jul–13 Aug 1986 BL Uncommon	8465	GREEN CLOVERWORM <i>Plathypena scabra</i> (F.) Carroll Co. 16 Sep 1985; Tuscarawas Co. 26 Mar–13 Aug 1986 BL, BLT, S Abundant
8314	DEFINITE-MARKED TUSOCK MOTH <i>Orgyia definita</i> Pack. Carroll Co. 8 Oct 1985; Tuscarawas Co. 29 May 1986 BL, BLT Uncommon	8481	PINK-BORDERED YELLOW <i>Phytometra rhodarialis</i> (Wlk.) Carroll Co. 23 May 1985; Tuscarawas Co. 29 May 1986 BL, BLT Uncommon
8316	WHITE-MARKED TUSOCK MOTH <i>Orgyia leucostigma</i> (J. E. Smith) Carroll Co. 17 Jul–8 Oct 1985 BL Uncommon	8490	DECORATED OWLET <i>Pangrapta decoralis</i> Hbn. Tuscarawas Co. 29 May 1986 S Rare
FAMILY NOCTUIDAE-Owlet moths		8499	COMMON FUNGUS MOTH <i>Metalectra discalis</i> (Grt.) Tuscarawas Co. 29 May–14 Jul 1986 S Uncommon
8322	AMERICAN IDIA <i>Idia americalis</i> (Gn.) Carroll Co. 23 May 1985; Tuscarawas Co. 7 Jul 1986 BL, Uncommon	8574	VELVET BEAN CATERPILLAR <i>Anticarsia gemmatilis</i> Hbn. Tuscarawas Co. 23 Sep–8 Oct 1986 BLT Uncommon
8323	COMMON IDIA <i>Idia aemula</i> Hbn. Carroll Co. 17 Jul–16 Aug 1985; Tuscarawas Co. 7 Jul–23 Sep 1986 BL, BLT, S Common	8587	RED-LINED PANOPODA <i>Panopoda rufimargo</i> (Hbn.) Carroll Co. 17 Jul 1985; Tuscarawas Co. 14 Jul 1986 BLT Uncommon
8333	TOOTHED IDIA <i>Idia denticularis</i> (Harv.) Carroll Co. 17 Jun–17 Jul 1985; Tuscarawas Co. 14 Jul 1986 BL, S Uncommon	8591	COMMON OAK MOTH <i>Phoberia atomaris</i> Hbn. Carroll Co. 27 Apr 1985 BL Rare
		8689	LUNATE ZALE <i>Zale lunata</i> (Drury) Carroll Co. 23 May 1985; Tuscarawas Co. 19 Apr–23 Sep 1986 BL, BLT, S Abundant
		8697	COLORFUL ZALE <i>Zale minerea</i> (Gn.) Tuscarawas Co. 7 Jul 1986 S Uncommon
		8703	DUPLICATE ZALE <i>Zale duplicata</i> (Bethune) Tuscarawas Co. 29 May 1986 BL, S Common

TABLE 1 (continued)

8704	BROWN-SPOTTED ZALE <i>Zale belata</i> (Sm.) Tuscarawas Co. 29 May 1986 S Rare	Sep 1986 BL, BLT Common
8713	BOLD-BASED ZALE <i>Zale lunifera</i> (Hbn.) Carroll Co. 22 Apr 1985; Tuscarawas Co. 1 Apr–7 May 1986 BL, BLT Common	8957 EYED PAECTES <i>Paectes oculatrix</i> (Gn.) Tuscarawas Co. 29 May–13 Aug 1986 BL, S Common
8717	HORRID ZALE <i>Zale horrida</i> Hbn. Tuscarawas Co. 7 May–23 Jun 1986 BL, S Uncommon	8962 <i>Paectes abrostoloides</i> (Gn.) Tuscarawas Co. 13 Sep 1986 BL Rare
8719	LOCUST UNDERWING <i>Euparthenos nubilis</i> (Hbn.) Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 7 May–13 Aug 1986 BL, BLT, S Abundant	8970 EYED BAILEYA <i>Baileya ophthalmica</i> (Gn.) Tuscarawas Co. 29 May–13 Aug 1986 BL, BLT Uncommon
8721	FALSE UNDERWING <i>Allotria elonympha</i> (Hbn.) Carroll Co. 23 May–16 Aug 1985; Tuscarawas Co. 7 May 1986 BL Uncommon	8971 SLEEPING BAILEYA <i>Baileya dormitans</i> (Gn.) Tuscarawas Co. 7 May 1986 BLT Uncommon
8727	MAPLE LOOPER <i>Parallelia bistriaris</i> Hbn. Tuscarawas Co. 29 May–13 Aug 1986 BL Uncommon	8972 PALE BAILEYA <i>Baileya levitans</i> (Sm.) Tuscarawas Co. 29 Apr–30 Jul 1986 BL, BLT Uncommon
8731	<i>Euclidea cuspea</i> (Hbn.) Carroll Co. 24 May 1985; Tuscarawas Co. 7 May 1986 BL Uncommon	8973 SMALL BAILEYA <i>Baileya australis</i> (Grt.) Tuscarawas Co. 7 May 1986 BL Rare
8738	CLOVER LOOPER <i>Caenurgina crassiuscula</i> (Haw.) Carroll Co. 22 Apr–16 Sep 1985; Tuscarawas Co. 19 Apr–13 Sep 1986 BL, BLT, S Abundant	9407 <i>Lithacodia muscosula</i> (Gn.) Carroll Co. 27 Jun 1985 BL Rare
8739	FORAGE LOOPER <i>Caenurgina erechtea</i> (Cram.) Carroll Co. 27 Jun–16 Aug 1985; Tuscarawas Co. 23 Jun 1986 BL, BLT Common	9051 <i>Lithacodia musta</i> (G. & R.) Tuscarawas Co. 29 May 1986 BL Rare
8764	SHORT-LINED CHOCOLATE <i>Argyrostroma anilis</i> (Drury) Carroll Co. 23 May 1985 BL Rare	9053 PINK-BARRED LITHACODIA <i>Lithacodia carneola</i> (Gn.) Carroll Co. 23 May 1985; Tuscarawas Co. 7–29 May 1986 BL, BLT Common
8769	MOON-LINED MOTH <i>Spiloloma lunilinea</i> Grt. Tuscarawas Co. 23 Jun 1986 S Rare	9062 TUFTED BIRD-DROPPING MOTH <i>Cerma cerintha</i> (Tr.) Carroll Co. 23 May–17 Jul 1985 BL, BLT Uncommon
8771	THE PENITENT <i>Catocala piatrix</i> Grt. Carroll Co. 9 Oct 1985 BL Uncommon	9065 GREEN LEUCONYCTA <i>Leuconycta diphteroides</i> (Gn.) Carroll Co. 23 May–16 Aug 1985 BL; Tuscarawas Co. 7 May–13 Aug 1986 BL Common
8779	SERENE UNDERWING <i>Catocala serena</i> Edw. Carroll Co. 16 Aug 1985 BL Rare	9066 <i>Leuconycta lepidula</i> (Grt.) Tuscarawas Co. 29 May 1986 BL, BLT, S Common
8784	OBSCURER UNDERWING <i>Catocala obscura</i> Stkr. Carroll Co. 16 Aug 1985 BL Uncommon	9182 <i>Panthea furcilla</i> (Pack.) Tuscarawas Co. 30 Jul–13 Aug 1986 BL Uncommon
8788	YELLOW GRAY UNDERWING <i>Catocala resecta</i> Grt. Carroll Co. 16 Aug–16 Sep 1985 BL, BLT Common	9185 <i>Colocasia propinquinella</i> (Grt.) Carroll Co. 23 Apr–23 May 1985 BL; Tuscarawas Co. 19 Apr–30 Jul 1986 BL, BLT Abundant
8792	WIDOW UNDERWING <i>Catocala vidua</i> (J. E. Smith) Carroll Co. 16 Aug 1985 BL Rare	9189 <i>Charadra deridens</i> (Gn.) Carroll Co. 16 Aug 1985 BL Rare
8794	TEARFUL UNDERWING <i>Catocala lachrymosa</i> Gn. Tuscarawas Co. 14 Jul 1986 BL Rare	9193 <i>Raphia frater</i> Grt. Carroll Co. 8 Jul–16 Aug 1985 BL Uncommon
8798	THE BRIDE <i>Catocala neogama</i> (J. E. Smith) Carroll Co. 16 Aug 1985 BL Rare	9200 AMERICAN DAGGER MOTH <i>Acronicta americana</i> (Harr.) Carroll Co. 17 Jul–16 Aug 1985 BLT; Tuscarawas Co. 29 May–14 Jul 1986 BL, S Abundant
8801	ILIA UNDERWING <i>Catocala ilia</i> (Cram.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 7 Jul 1986 BL, S Abundant	9209 RADCLIFFE'S DAGGER MOTH <i>Acronicta radcliffei</i> (Harv.) Tuscarawas Co. 7 Jul 1986 BL Rare
8803a	WHITE UNDERWING <i>Catocala relictia</i> f. <i>elda</i> Behr. Carroll Co. 8 Oct 1985; Tuscarawas Co. 13 Sep 1986 BL Uncommon	9211 <i>Acronicta tritona</i> (Hbn.) Carroll Co. 24 May 1985 BL Rare
8832	DARLING UNDERWING <i>Catocala cara</i> Gn. Tuscarawas Co. 23 Sep 1986 S Rare	9221 FUNERARY DAGGER MOTH <i>Acronicta funeralis</i> G. & R. Carroll Co. 23 May–16 Aug 1985 BL, BLT; Tuscarawas Co. 7 May–13 Aug 1986 BL Uncommon
8857	ULTRONIA UNDERWING <i>Catocala ultronia</i> (Hbn.) Carroll Co. 16 Aug 1985; Tuscarawas Co. 23 Jun–13 Aug 1986 BL, BLT, S Common	9225 DELIGHTFUL DAGGER MOTH <i>Acronicta vimula</i> (Grt.) Tuscarawas Co. 29 Apr–13 Aug 1986 BL, BLT Abundant
8858	HAWTHORN UNDERWING <i>Catocala crataegi</i> Saund. Tuscarawas Co. 7 Jul 1986 S Rare	9229 SPEARED DAGGER MOTH <i>Acronicta basta</i> Gn. Carroll Co. 23 May–16 Aug 1985 BL; Tuscarawas Co. 7 May–13 Aug 1986 BL, BLT, S Abundant
8863	WONDERFUL UNDERWING <i>Catocala mira</i> Grt. Tuscarawas Co. 14 Jul 1986 BL Uncommon	9236 OCHRE DAGGER MOTH <i>Acronicta morula</i> G. & R. Carroll Co. 16 Aug 1985 BL; Tuscarawas Co. 7 May–30 Jul 1986 BL Uncommon
8864	WOODY UNDERWING <i>Catocala grynea</i> (Cram.) Carroll Co. 17 Jul–16 Aug 1985; Tuscarawas Co. 7 Jul–13 Aug 1986 BL, BLT, S Common	9237 INTERRUPTED DAGGER MOTH, <i>Acronicta interrupta</i> Gn. Carroll Co. 16 Aug 1985 BLT; Tuscarawas Co. 29 May 1986 BLT Uncommon
8876	LITTLE NYMPH <i>Catocala micronympha</i> Gn. Carroll Co. 16 Aug 1985 BL Rare	9243 OVATE DAGGER MOTH <i>Acronicta ovata</i> Grt. Tuscarawas Co. 23 Jun–7 Jul 1986 BLT, S Uncommon
8878	GIRLFRIEND UNDERWING <i>Catocala amica</i> (Hbn.) Carroll Co. 16 Aug 1985 BL Rare	9245 HESITANT DAGGER MOTH <i>Acronicta hesitata</i> (Grt.) Carroll Co. 23 May 1985 BL; Tuscarawas Co. 13 Aug 1986 BL Uncommon
8890	SOYBEAN LOOPER <i>Pseudoplusia includens</i> (Wlk.) Tuscarawas Co. 13 Sep 1986 BL Rare	9249 <i>Acronicta incerta</i> Morr. Tuscarawas Co. 29 May 1986 BLT Rare
8898	UNSPOTTED LOOPER <i>Allographa aerea</i> (Hbn.) Carroll Co. 24 May–16 Aug 1985; Tuscarawas Co. 29 May–13 Sep 1986 BL Uncommon	9251 RETARDED DAGGER MOTH <i>Acronicta retardata</i> (Wlk.) Carroll Co. 23 May–27 Jun 1985 BL; Tuscarawas Co. 7 May–23 Jun 1986 BLT, S Uncommon
8907	BILOBED LOOPER <i>Autographa biloba</i> (Steph.) Carroll Co. 22 Apr–17 Jul 1985 BLT Uncommon	9254 AFFLICTED DAGGER MOTH <i>Acronicta afflicta</i> Grt. Carroll Co. 16 Aug 1985 BLT Rare
8908	COMMON LOOPER <i>Autographa precationis</i> (Gn.) Carroll Co. 16 Sep–8 Oct 1985; Tuscarawas Co. 23 Jun 1986 BL, BLT Uncommon	9261 <i>Acronicta impressa</i> Wlk. Tuscarawas Co. 30 Jul 1986 BL Rare
8924	CELERY LOOPER <i>Anagrapha falcifera</i> (Kby.) Carroll Co. 22 Apr–16 Sep 1985; Tuscarawas Co. 19 Apr–13	9281 GREEN MARVEL <i>Agriopodes fallax</i> (H.-S.) Carroll Co. 16 Aug 1985 BL Rare
		9284 GRAY MARVEL <i>Agriopodes teratophora</i> (H.-S.) Tuscarawas Co. 23 Jun 1986 BLT Rare



TABLE 1 (continued)

9285	THE HEBREW <i>Polygrammate hebraicum</i> Hbn. Carroll Co. 27 Jun-16 Aug 1985 BLT; Tuscarawas Co. 29 May-30 Jul 1986 BL, BLT Abundant	9684	BEAUTIFUL WOOD NYMPH <i>Eudryas grata</i> Hbn. Carroll Co. 17 Jul-16 Aug 1985 BL, BLT Common
9301	BEAUTIFUL WOOD NYMPH <i>Eudryas grata</i> (F.) Tuscarawas Co. 23 Jun-14 Jul 1986 BL, BLT Common	9688	THE WEDGLING <i>Galgula partita</i> Gn. Carroll Co. 22 Apr-16 Sep 1985 BL, BLT; Tuscarawas Co. 30 Jul 1986 BL, BLT Uncommon
9314	EIGHT-SPOTTED FORESTER <i>Alypia octomaculata</i> (F.) Carroll Co. 23 May 1985 N Rare	9690	WHITE-DOTTED GROUNDLING <i>Platysenta videns</i> (Gn.) Tuscarawas Co. 23 June-30 Jul 1986 BLT Rare
9391	DOCK RUSTIC <i>Luperina passer</i> (Gn.) Tuscarawas Co. 13 Aug 1986 BLT Rare	9696	DUSKY GROUNDLING <i>Platysenta vecors</i> (Gn.) Carroll Co. 16 Aug 1985 BL; Tuscarawas Co. 7 May-7 Jul 1986 BLT, S Uncommon
9427	<i>Meroplon diversicolor</i> (Morr.) Tuscarawas Co. 23 Sep 1986 BLT Rare	9725	OBTUSE YELLOW <i>Stiriodes obtusa</i> (H.-S.) Tuscarawas Co. 13-23 Sep 1986 BL, BLT Uncommon
9454	VEILED EAR MOTH <i>Amphipoea velata</i> (Wlk.) Tuscarawas Co. 23 Jun 1986 BL, BLT, S Uncommon	9766	GOLDENROD STOWAWAY <i>Cirrhophanus triangulifer</i> (Grt.) Carroll Co. 16 Sep 1985 BLT Rare
9457	AMERICAN EAR MOTH <i>Amphipoea americana</i> (Speyer) Tuscarawas Co. 14 Jul 1986 BL Rare	9781	GOLD MOTH <i>Basilodes pepita</i> Gn. Tuscarawas Co. 30 Jul 1986 BLT Rare
9466	BURDOCK BORER <i>Papaipema cataphracta</i> (Grt.) Carroll Co. 8 Oct 1985 BLT Uncommon	9818	FEEBLE GRASS MOTH <i>Amolita fessa</i> Grt. Carroll Co. 27 Jun 1985 BL Rare
9471	NORTHERN BURDOCK BORER <i>Papaipema arctivorens</i> Hamp. Carroll Co. 16 Sep 1985; Tuscarawas Co. 13 Sep 1986 BL, BLT Common	9874	SWORDGRASS MOTH <i>Xylena curvimacula</i> (Morr.) Tuscarawas Co. 26 Mar 1986 S Rare
9473	<i>Papaipema impecuniosa</i> (Grt.) Carroll Co. 8 Oct 1985 BLT Uncommon	9888	NAMELESS PINION <i>Lithophane innominata</i> (Sm.) Tuscarawas Co. 19 Apr 1986 BL, BLT Uncommon
9483	SENSITIVE FERN BORER <i>Papaipema inquaesita</i> (G. & R.) Carroll Co. 16 Sep 1985; Tuscarawas Co. 13 Aug-23 Sep 1986 BL, BLT Common	9893	HEMINA PINION <i>Lithophane hemina</i> f. <i>lignicosta</i> Franc. Tuscarawas Co. 26 Mar 1986 S Rare
9485	<i>Papaipema baptisiae</i> (Bird) Carroll Co. 16 Aug-8 Oct 1985 BLT Uncommon	9910	ASHEN PINION <i>Lithophane antennata</i> (Wlk.) Carroll Co. 22 Apr 1985 BL; Tuscarawas Co. 7 May 1986 BLT Uncommon
9486	<i>Papaipema birdi</i> (Dyar) Carroll Co. 8 Oct 1985 BL; Tuscarawas Co. 23 Sep 1986 BLT Uncommon	9916	DOWDY PINION <i>Lithophane unimoda</i> (Lint.) Carroll Co. 22 Apr 1985 BL; Tuscarawas Co. 26 Mar-19 April 1986 BL, BT, S Uncommon
9496	STALK BORER <i>Papaipema nebris</i> (Gn.) Tuscarawas Co. 23 Sep 1986 BLT Uncommon	9929	MUSTARD SALLOW <i>Pyreferra hesperidago</i> (Gn.) Tuscarawas Co. 26 Mar 1986 S Rare
9497	SUNFLOWER BORER <i>Papaipema necopina</i> (Grt.) Carroll Co. 16 Sep 1985 BL Rare	9933	STRAIGHT-TOOTHED SALLOW <i>Eupsilia vinulenta</i> (Grt.) Tuscarawas Co. 26 Mar 1986 S Uncommon
9501	JOE PYE WEED BORER <i>Papaipema eupatorii</i> (Lyman) Carroll Co. 8 Sep 1985 BLT Uncommon	9933.1	<i>Eupsilia sidus</i> (Gn.) Carroll Co. 9 Mar 1986 S Rare
9503	RIGID SUNFLOWER MOTH <i>Papaipema rigida</i> (Grt.) Tuscarawas Co. 23 Sep 1986 BLT Uncommon	9935	THREE SPOTTED SALLOW <i>Eupsilia tristigmata</i> (Grt.) Tuscarawas Co. 26 Mar 1986 BT, S Uncommon
9505	IRONWEED BORER <i>Papaipema cerrusata</i> (Grt.) Carroll Co. 8 Oct 1985 BLT Common	9936	MORRISON'S SALLOW <i>Eupsilia morrisoni</i> (Grt.) Tuscarawas Co. 26 Mar-1 Apr 1986 BT, S Uncommon
9509	<i>Papaipema unimoda</i> (Sm.) Carroll Co. 8 Oct 1985 BL Uncommon	9939	LOST SALLOW <i>Eupsilia devia</i> (Grt.) Tuscarawas Co. 25 Mar 1986 S Rare
9520	ELDER SHOOT BORER <i>Achatodes zeae</i> (Harr.) Tuscarawas Co. 7 Jul 1986 S Rare	9943	UNSATD SALLOW <i>Metaxaglaea inulta</i> (Grt.) Carroll Co. 8 Oct 1985 BL Rare
9522	<i>Iodopepla u-album</i> (Gn.) Carroll Co. 10 Aug 1985 BLT Rare	9946	SLOPING SALLOW <i>Epiglaea decliva</i> (Grt.) Carroll Co. 8 Oct 1985 BL Rare
9525	CATTAIL BORER <i>Bellura obliqua</i> (Wlk.) Tuscarawas Co. 7 May 1986 BLT Rare	9952	SCALLOPED SALLOW <i>Eucirroedia pampina</i> (Gn.) Carroll Co. 8 Oct 1985 BL, BLT; Tuscarawas Co. 13 Sep 1986 BL Uncommon
9545	AMERICAN ANGLE SHADES <i>Euplexia benesimilis</i> McD. Carroll Co. 27 Jun 1985 BL; Tuscarawas Co. 7 May-14 Jul 1986 BL, BLT Common	9961	DOTTED SALLOW <i>Anathix ralla</i> (G. & R.) Tuscarawas Co. 23 Sep 1986 BL Uncommon
9547	<i>Phlogophora periculosa</i> Gn. Carroll Co. 16 Sep 1985 BLT Rare	10012	CHOSEN SALLOW <i>Eutolyte electilis</i> (Morr.) Carroll Co. 22 Apr 1985 BL Uncommon
9556	CLOAKED MARVEL <i>Chytonix palliatricula</i> (Gn.) Carroll Co. 22 Apr-16 Aug 1985 BL Uncommon	10021	GROTE'S SALLOW <i>Copivaleria grotei</i> (Morr.) Carroll Co. 22 Apr-26 May 1985 BL, BLT; Tuscarawas Co. 19-29 April 1986 BL, BLT Common
9560	AMERICAN BIRDS-WING MOTH <i>Dypterygia rozmani</i> Berio Tuscarawas Co. 23 Jun 1986 S Rare	10067	FRINGE-TREE SALLOW <i>Adita chionanthi</i> (J. E. Smith) Carroll Co. 16 Aug-16 Sep 1985 BL Rare
9582	<i>Nedra ramosula</i> (Gn.) Carroll Co. 22 Apr 1985 BLT; Tuscarawas Co. 13 Aug 1986 BL Uncommon	10288	DISPARAGED ARCHES <i>Polia detracta</i> (Wlk.) Tuscarawas Co. 13 Jun 1986 BL Rare
9638	COPPER UNDERWING <i>Amphipyra pyramidoides</i> Gn. Carroll Co. 17 Jul-16 Sep 1985 S; Tuscarawas Co. 13 Aug 1986 S Uncommon	10291	FLUID ARCHES <i>Polia latex</i> (Gn.) Carroll Co. 24 May-17 Jul 1985 BL; Tuscarawas Co. 18-20 May 1986 BL, BLT Common
9661	VERBENA MOTH <i>Crambodes talidiformis</i> Gn. Carroll Co. 24 May 1985 BL Rare	10292	HITCHED ARCHES <i>Melanchnra adjuncta</i> (Gn.) Tuscarawas Co. 7 May 1986 BL Rare
9662	MANY-DOTTED APPLE WORM <i>Balsa malana</i> (Fitch) Tuscarawas Co. 7 May 1986 BL Rare	10293	ZEBRA CATERPILLAR <i>Melanchnra picta</i> (Harr.) Tuscarawas Co. 13 Aug 1986 BLT Uncommon
9663	THREE-LINED Balsa <i>Balsa tristrigella</i> (Wlk.) Carroll Co. 23 May 1985 BL Uncommon	10304	STRIPED GARDEN CUTWORM <i>Lacanobia legitima</i> (Grt.) Carroll Co. 24 May 1985 BL Uncommon
9664	WHITE-BLOTCHED Balsa <i>Balsa labecula</i> (Grt.) Carroll Co. 17 Jul 1985 S; Tuscarawas Co. 29 May 1986 BL Uncommon	10368	THE THINKER <i>Lacinipolia meditata</i> (Grt.) Carroll Co. 16 Sep 1985 BLT Rare
9666	FALL ARMYWORM <i>Spodoptera frugiperda</i> (J. E. Smith) Carroll Co. 16 Sep 1985 BLT Uncommon	10397	BRISTLY CUTWORM <i>Lacinipolia renigera</i> (Steph.) Carroll Co. 23 May-16 Sep 1985 BL, BLT; Tuscarawas Co. 29 May-23 Sep 1986 BL, BLT, S Abundant
9669	YELLOW-STRIPED ARMYWORM <i>Spodoptera ornithogalli</i> (Gn.) Carroll Co. 16 Sep 1985 BLT Uncommon	10405	BRINDLED ARCHES <i>Lacinipolia lorea</i> (Gn.) Carroll Co. 27 Jun 1985 BL; Tuscarawas Co. 29 May-23 Jun 1986 BLT Uncommon
9681	FESTIVE MIDGET <i>Elaphria festivoides</i> (Gn.) Carroll Co. 23 May 1985 BL; Tuscarawas Co. 7 May 1986 BL Uncommon		



TABLE 1 (continued)

10414	IMPLICIT ARCHES <i>Lacinipolia implicata</i> McD. Carroll Co. 16 Sep 1985 BL, BLT Uncommon	10670	DINGY CUTWORM <i>Feltia jaculifera</i> (Gn.) Tuscarawas Co. 13–23 Sep 1986 BLT Uncommon
10431	WHEAT-HEAD ARMYWORM <i>Faronta diffusa</i> (Wlk.) Carroll Co. 16 Aug 1985 BL Uncommon	10675	TRICOSE DART <i>Feltia tricolora</i> (Lint.) Tuscarawas Co. 13 Sep 1986 BLT Uncommon
10436	BOG GRASS MOTH <i>Aletia oxygala</i> (Grt.) 29 May–13 Aug 1986 BLT, S Uncommon	10676	MASTER'S DART <i>Feltia herilis</i> (Grt.) Carroll Co. 16 Aug–16 Sep 1985 BL, BLT; Tuscarawas Co. 13–23 Sep 1986 BL, BLT Abundant
10438	ARMYWORM MOTH <i>Pseudaletia unipuncta</i> (Haw.) Carroll Co. 22 Apr–16 Sep 1985 BL, BLT Common; Tuscarawas Co. 26 Mar–13 Sep 1986 BL, BLT, S Abundant	10803	FLEECE-WINGED DART <i>Euxoa velleripennis</i> (Grt.) Carroll Co. 16 Sep 1985 BL Uncommon
10446	MANY-LINED WAINSCOT <i>Leucania multilinea</i> Wlk. Carroll Co. 24 May 1985 BL; Tuscarawas Co. 29 May–13 Aug 1986 BL, BLT, S Common	10891	FLAME-SHOULDERED DART <i>Ocbropleura plecta</i> (L.) Carroll Co. 23 May–16 Sep 1985 BL; Tuscarawas Co. 7 May–13 Sep 1986 BL Abundant
10459	UNARMED WAINSCOT <i>Leucania inermis</i> (Fbs.) Carroll Co. 24 May 1985 BL Rare	10903	SNOWY DART <i>Euagrotis illapsa</i> (Wlk.) Carroll Co. 16 Sep 1985 BL Rare
10461	URSULA WAINSCOT, <i>Leucania ursula</i> (Fbs.) Carroll Co. 23 May–16 Aug 1985 BL, BLT; Tuscarawas Co. 7 May–30 Jul 1986 BL, BLT Common	10915	VARIEGATED CUTWORM <i>Peridroma saucia</i> (Hbn.) Tuscarawas Co. 26 Mar–14 Jul 1986 BLT, S Common
10462	FALSE WAINSCOT <i>Leucania pseudargyria</i> Gn. Tuscarawas Co. 23 Jun–14 Jul 1986 BL, S Uncommon	10926	W-MARKED CUTWORM <i>Spaelotis clandestina</i> (Harr.) Carroll Co. 8 Oct 1985 BLT; Tuscarawas Co. 29 May–23 Sep 1986 BL, BLT, S Abundant
10487	RUBY QUAKER <i>Orthosia rubescens</i> (Wlk.) Tuscarawas Co. 29 Apr 1986 BLT Rare	10942	LESSER BLACK LETTER DART <i>Xestia adela</i> Franc. Carroll Co. 16 Sep 1985 BL; Tuscarawas Co. 13 Aug–13 Sep 1986 BL, BLT Common
10495	SPECKLED GREEN FRUITWORM <i>Orthosia bibisci</i> (Gn.) Carroll Co. 22 Apr 1985 BL; Tuscarawas Co. 26 Mar 1986 S Abundant	10942.1	GREATER BLACK LETTER DART <i>Xestia dolosa</i> Franc. Carroll Co. 23 May–16 Sep 1985 BL, BLT; Tuscarawas Co. 29 May–13 Sep 1986 BL, BLT, S Common
10501	NORMAN'S QUAKER <i>Crocigrapha normani</i> (Grt.) Carroll Co. 22 Apr 1985 BL, BLT; Tuscarawas Co. 19 Apr–7 May 1986 BL, BLT Abundant	10943	NORMAN'S DART <i>Xestia normaniana</i> (Grt.) Carroll Co. 8 Oct 1985 BLT; Tuscarawas Co. 13 Sep 1986 BL, BLT Uncommon
10502	INTRACTABLE QUAKER <i>Himella intractata</i> (Morr.) Carroll Co. 22 Apr 1985 BLT Rare	10944	SMITH'S DART <i>Xestia smithii</i> (Snell.) Carroll Co. 16 Aug–16 Sep 1985 BLT; Tuscarawas Co. 23 Sep 1986 BLT Uncommon
10518	DISTINCT QUAKER <i>Achatia distincta</i> Hbn. Carroll Co. 22 Apr 1985 BL Uncommon	10950	PINK-SPOTTED DART <i>Xestia bicarnea</i> (Gn.) Carroll Co. 16 Sep 1985 BL, BLT; Tuscarawas Co. 13 Aug–23 Sep 1986 BL, BLT Common
10520	BICOLORED WOODGRAIN <i>Morrisonia evicta</i> (Grt.) Carroll Co. 22 Apr 1985 BL, BLT Uncommon	10955	SPOTTED-SIDED CUTWORM <i>Xestia badinodis</i> (Grt.) Carroll Co. 16 Sep 1985 BLT; Tuscarawas Co. 13–23 Sep 1986 BL, BLT, S Abundant
10521	CONFUSED WOODGRAIN, <i>Morrisonia confusa</i> (Hbn.) Carroll Co. 22 Apr–23 May 1985 BLT; Tuscarawas Co. 7 May 1986 BLT Common	10994	REDDISH SPECKLED DART <i>Cerastis tenebrifera</i> (Wlk.) Carroll Co. 22 Apr 1985 BLT; Tuscarawas Co. 1–19 Apr 1986 BL, BLT Uncommon
10524	BRONZED CUTWORM <i>Nepheleodes minians</i> Gn. Carroll Co. 16 Sep 1985 BL, BLT; Tuscarawas Co. 13–23 Sep 1986 BL, BLT Abundant	10998	BENT-LINED DART <i>Choeophora fungorum</i> G. & R. Tuscarawas Co. 13 Sep 1986 BL Rare
10578	SMALL BROWN QUAKER <i>Pseudorthodes vecors</i> (Gn.) Tuscarawas Co. 7 May–30 Jul 1986 BL, BLT, S Abundant	11006	BROWN-COLLARED DART <i>Protolampra bruneicollis</i> (Grt.) Tuscarawas Co. 23 Jun 1986 BLT Rare
10585	RUSTIC QUAKER <i>Orthodes crenulata</i> (Btlr.) Carroll Co. 23 May 1985 BL Uncommon	11007	SIGMOID DART <i>Euretagrotis sigmoides</i> (Gn.) Tuscarawas Co. 14 Jul 1986 BL Rare
10587	CYNICAL QUAKER <i>Orthodes cynica</i> Gn. Carroll Co. 24 May 1985 BL; Tuscarawas Co. 29 May–13 Sep 1986 BL, BLT, S Abundant	11008	<i>Euretagrotis perattenta</i> (Grt.) Tuscarawas Co. 23 Jun 1986 BLT Rare
10627	SIGNATE QUAKER <i>Tricholita signata</i> (Wlk.) Carroll Co. 16 Sep 1985 BL Rare	11063	BORDERED SALLOW <i>Pyrrhia umbra</i> (Hufn.) Carroll Co. 16 Aug 1985 BL, BLT Rare
10648	CLAY-BACKED CUTWORM <i>Agrotis gladiaria</i> Morr. Carroll Co. 16 Sep 1985 BLT; Tuscarawas Co. 23 Sep 1986 BL, BLT Common	11068	CORN EARWORM <i>Heliothis zea</i> (Boddie) Carroll Co. 16 Sep 1985 BL; Tuscarawas Co. 13 Sep 1986 BL Uncommon
10663	BLACK CUTWORM <i>Agrotis ipsilon</i> (Hufn.) Carroll Co. 22 Apr–16 Aug 1985 BL, BLT; Tuscarawas Co. 19 Apr–13 Sep 1986 BL, BLT, S Abundant	11128	ARCIGERA FLOWER MOTH <i>Schinia arcigera</i> (Gn.) Carroll Co. 16 Aug 1985 BLT; Tuscarawas Co. 23 Sep 1986 BLT Uncommon

the species collected is known to be "threatened," "endangered," or "of special concern." This terminology follows that of the Ohio Department of Natural Resources, Division of Wildlife: "endangered" = in danger of being extirpated; "threatened" = likely to become endangered if no action is taken; "special concern" = rare, peripheral, or status unknown and of particular interest to the public.

To estimate the complete faunal list of this area, which would include species that should occur but were not collected during this study, a hypothetical list of common species that should occur was prepared from collections made by the authors in neighboring Columbiana, Portage, Stark and Wayne counties in 1985 and 1986. By comparing species on the actual list with those on the hypothetical list, it is estimated that about

67% of the moths that should occur in the area were recorded. For butterflies and skippers, approximately 45% of the estimated fauna were taken. These differences reflect the interests, competence, and capabilities of the authors.

Dury (1878) included 475 species of Lepidoptera that were observed in the vicinity of Cincinnati, Ohio. In 1882, Pilate published a list of 463 lepidopterans collected in and around Dayton, Ohio. Henninger (1910) compiled a similar list of 463 from two collections that he obtained from Seneca County, Ohio. Only 241 species and forms were included in a faunal list of Pickaway County, Ohio (Bales 1909). Rings et al. (1987) reported 511 species in an annotated checklist of Lepidoptera occurring at The Wilderness Center in Stark County. From these reports and from the present study,

it may be concluded that from 400 to 500 species commonly occur in a given, favorable locality in Ohio and that probably 600 to 700 species may be taken in a locality characterized by high host plant diversity, if collecting is done at frequent intervals over a period of five or more years.

ACKNOWLEDGMENTS. The authors are indebted to Dr. C. V. Covell, Jr., Louisville, Kentucky for the identification of geometrids that we were unable to determine.

#### LITERATURE CITED

- Bales, B. R. 1909 A partial list of the Lepidoptera of Pickaway County, Ohio. *Entomol. News* 20 (4): 169-177.
- Covell, Jr., C. V. 1984 A field guide to the moths of eastern North America. Boston, MA: Houghton Mifflin Co.
- Dury, C. 1878 Catalogue of the Lepidoptera observed in the vicinity of Cincinnati, Ohio. *J. Cin. Soc. Nat. Hist* 1: 12-23.
- Forbes, W. T. M. 1923 The Lepidoptera of New York and neighboring states. Primitive forms, microlepidoptera, pyraloids, bombyces. Cornell Univ. Agr. Exp. Sta., Mem. 68: 1-729.
- 1948 Lepidoptera of New York and neighboring states. Part II. Geometridae, Notodontidae, Sphingidae, Lymantridae. Cornell Univ. Agr. Exp. Sta., Mem. 274: 1-263.
- 1954 Lepidoptera of New York and neighboring states. Part III. Noctuidae. Cornell Univ. Agr. Sta., Mem. 329: 1-433.
- 1960 Lepidoptera of New York and neighboring states. Part IV. Agaristidae through Nymphalidae including butterflies. Cornell Univ. Agr. Exp. Sta., Mem. 371: 1-188.
- Henninger, W. F. 1910 The macro-lepidoptera of Seneca County, Ohio. *Ohio Naturalist* 11(2): 233-242.
- Hodges, R. W., T. Dominick, D. R. Davis, D. C. Ferguson, J. G. Franclemont, E. G. Munroe and J. A. Powell, eds. 1983 Checklist of the Lepidoptera of America north of Mexico. London: E. W. Classey Ltd. and Washington, DC: Wedge Entomol. Res. Found.
- Klots, A. B. 1951 A field guide to the butterflies of North America, east of the Great Plains. Boston, MA: Houghton-Mifflin Co.
- Moore, S. 1955 An annotated list of the moths of Michigan, exclusive of the Tineodea (Lepidoptera). *Misc. Pub. Mus. Zool., Mich.* 88: 1-87.
- Pilate, G. R. 1882 List of Lepidoptera taken in and around Dayton, Ohio. *Papilio* 2(5): 66-71.
- Price, H. F. 1970 Butterflies of northwestern Ohio. *Midcontinent Lepidoptera Series* No. 14, St. Paul, Minn. 16 pp.
- Rings, R. W., R. M. Ritter, R. W. Hawes and E. H. Metzler 1987 A nine year study of the Lepidoptera of The Wilderness Center, Stark County, Ohio. *Ohio J. Sci.* 87(3): 55-61.
- Tietz, H. M. 1952 The Lepidoptera of Pennsylvania. A manual. Penn. State Col., Agr. Exp. Sta., 193 pp.